HAMMER HILL PROJECT

EL 9725
EL 10136
YEAR 7 ANNUAL REPORT
for period
13th February 2008 to 12th February 2009

Compiled by
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MAP REFERENCE:
Illogwa Creek 250K Sheet SG53/15
Huckitta 250K Sheet SF53/11
SUMMARY

This report presents the work completed during the seventh year of tenure on the Hammer Hill Project; a joint venture between Mithril Resources (manager), BHP Billiton and Arafura Resources. The project covers granted Exploration Licences EL 9725 and 10136, which have joint reporting status.

The Hammer Hill Project area straddles the Huckitta and Illogwa Creek 250,000-scale map sheets and is centred about 180 km northeast of Alice Springs, south of the Plenty Highway.

Work completed over the tenement area during the seventh year of tenure includes:

- A review of the final data from the VTEM survey
- Heritage surveys
- Ground EM (moving loop and fixed loop)
- Diamond drilling (3 drillholes)
- Petrography
- Downhole EM
- Geological mapping and rock sampling
- Planning of RAB/Aircore drilling

The diamond drilling intersected significant sulphide mineralisation including minor chalcopyrite. The style of mineralisation is thought to be that of a skarn type and conductive targets remain untested in the vicinity of the drilling.

Aircore and / or RAB drilling is planned on a number of traverses to determine the source of other magnetic targets on the project.
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1.0 Introduction

This report presents the work completed on the Hammer Hill Project by Mithril Resources for the year ending 12 February 2009. The project comprises Exploration Licences EL 9725 and 10136, which were granted on 18 December 2001 and 13 February 2002, respectively. These tenements have joint reporting status.

On 22 November 2005, Mithril Resources entered a Heads-of-Agreement with Arafura Resources to farm-in to the Hammer Hill Project. The first phase of the farm-in agreement was successfully completed on 26 June 2006, with Mithril Resources appointed as tenement operators on 31 July 2006. In November 2007 BHP Billiton elected to participate in a joint venture with Mithril whereby BHP Billiton could earn up to 51% of the project (leaving Mithril with 19%) though sole funding the expenditure on the project to the tune of $5M.

The Hammer Hill JV Project area is centred about 180 km northeast of Alice Springs and is contiguous with Mithril’s Indiana Project (Figure 1). Access is via the Plenty Highway, which passes through the northernmost part of EL 10136. Station tracks provide reasonable access throughout the project area.

Figure 1: Project Location Plan

Mithril initially targeted the area for Ni-Cu-PGE sulphide deposits associated with mafic and ultramafic magmatic rocks as such rock types have been identified at the Hammer Hill Prospect in EL 9725 where they are associated with elevated nickel and chrome. However recent drilling indicates the area is also prospective for copper rich skarn type mineralisation.
2.0 Tenure

An application for EL 9725 was submitted on 14 October 1996 by Star Money Lenders, which later became McCleary Investments Pty Ltd. Title was granted for a six year period on 17 December 2001. On the 24 December 2001, the title was transferred to Arafura Resources NL. The original licence contained 285 blocks and has been compulsorily reduced three times to now consist of 51 blocks.

An application for EL 10136 was submitted on 1 June 1998 by Norman S McCleary. Title was granted for a six year period on 13 February 2002. On 5 March 2002, the title was transferred to Arafura Resources NL. The original licence contained 441 blocks and has been compulsorily reduced twice to now consist of 111 blocks.

On 22 November 2005, Mithril Resources entered a Heads-of-Agreement with Arafura Resources to farm-in to these tenements. The first phase of the Farm-in agreement was successfully completed on 26 June 2006, with Mithril Resources appointed as tenement operators as of 31 July 2006.

As mentioned above BHP Billiton entered into a joint venture with Mithril in November 2006 whereby they can earn a 51% interest in the project through expenditure of $5M.

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<th>Original size (blocks)</th>
<th>Current size (blocks)</th>
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<tr>
<td>EL 10136</td>
<td>13/02/2002</td>
<td>441</td>
<td>111</td>
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Table 1: Tenement details

3.0 Geology

3.1 Regional Geology

The Hammer Hill Project lies within the Irindina Province (also known as the Harts Range Metamorphic Complex) of the south-eastern Arunta Inlier. The Irindina Province comprises the Harts Range Group, a volcanosedimentary succession that was metamorphosed to granulite facies during the Ordovician Larapinta Event (475-460 Ma). Lithostratigraphical and geochronological data indicate that the Harts Range Group correlates with Neoproterozoic to Cambrian sediments of the adjacent Amadeus and Georgina Basins. Therefore, the Harts Range Group was probably deposited in a basin contiguous with, and possibly linking, the Amadeus and Georgina Basins.

While the Harts Range Group was metamorphosed to granulite-facies, however, sedimentation continued in the Amadeus and Georgina Basins. Structural and lithological evidence suggest that the Larapinta Event was extensional, with very deep burial required for the measured metamorphic conditions (30-35 km). Such an event was probably associated with mantle melting. The numerous mafic and ultramafic units found throughout the Irindina
Province, although their timing is poorly constrained, may have intruded during the Larapinta Event. These intrusions are considered prospective for Ni-Cu-PGE sulphide deposits.

The Harts Range Group and Amadeus and Georgina Basins were structurally inverted and brought to the surface during the mid-Palaeozoic Alice Springs Orogeny (450-300 Ma).

3.2 Project Geology

The Hammer Hill Project area is predominantly covered by a veneer of aeolian and colluvial sand and gravel. Strongly weathered biotite, garnet-biotite and quartzofeldspathic gneiss, calc-silicate rocks and amphibolite are sporadically exposed. There are numerous ferricrete, calcrete and silcrete rises, some of which may be indicative of the targeted mafic and ultramafic rocks. No detailed mapping has been undertaken in the area with the best regional maps compiled prior to detailed aeromagnetics and the current understanding of the geological history.

The area is considered prospective for Ni-Cu-PGE mineralisation associated with mafic and ultramafic intrusions. Vein-style REE-Th mineralisation has also been identified in the area.

4.0 Exploration Work Completed

4.1 Historical Exploration

Numerous companies and individuals have explored in the general area covered by EL 9725 and 10136. Exploration has been for numerous commodities, including Ni-Cu, the focus of current activity. A summary of the main exploration and associated reports is listed below:

**Placer Prospecting (Australia); ATP 1991, 2277; CR70-16, 70-008**

Tenement covered the eastern part of the Huckitta Dome and east to the Hammer Hill prospect. Explored for U, REE and tantalite in the known pegmatitic prospects, but without success. Low density stream sediment survey provided little encouragement. In the Valley Bore area (NTGS Prospect 3), a band of calc-silicate rocks averaging almost 3 metres in width was traced for 3 km with REE found in three places. Evaluation method not discussed and no assays given.

**Arcadia Minerals Ltd; ATP 2568; CR70-049**

Undertook a reasonable reconnaissance programme on the ultramafic units east of Hammer Hill. Describes them as relatively large olivine-rich intrusions within a 5 x 3 km zone. Individual outcrops range from a few metres to 1000 x 600 m. Serpentinite and carbonate mesh textures were noted. Assays - Ni to 0.9%, Cr averaging 2000 ppm and Nb only 2 ppm. Some intrusions are plug-like, whereas others are tabular. They typically have siliceous caps.

**Cogar and Felderhof; ATP 3193/EL374**
Tenement covered most of EL 9725 around Hammer Hill. Sampling of hillock 4 km northwest of Hammer Hill, which was originally thought to be gossanous, did not return anomalous base metal values.

**VAM Limited; ATP 2042; CR68-066**

Small tenement covered Quartz Hill (Holstein's REE prospect) about 14 km west-southwest of Hammer Hill. VAM sampled seven lodes for an average of 1.4 % combined REO, with individual assays to 3 % Ce and 5 % La. Lode sizes apparently attain 100 m length by 1-3 m in width. VAM points out that airborne reconnaissance highlighted numerous pegmatite reefs to the south of ATP 2042, and considered there should be good potential for discovery of more lodes. Area is reasonably exposed and well drained, so scintillometer, rockchip and stream sediment geochemistry surveys should be effective.

**Otter Exploration NL; EL1581; CR78-114, 80-123, 82-367, 79-119**

Tenement overlapped the northern margin of EL 10136. Predominantly explored for U, Molyhill tungsten and Jervois base metal mineralisation. Most work along the Mount Sainthill Fault Zone and the granite-rich terrain to the north. Investigated the ultramafic units 8 km north of the EL 10136 and returned surface assays of 860 ppm Ni, 70 ppm Cu, 160 ppm Co and 1150 ppm Cr.

**Hillrise Properties Pty Ltd, CRA Exploration; EL 1801 and EL 2494; CR79-12, 81-064, 82-052, 82-061**

REE pegmatites identified near Valley Bore and the western margin of EL 9725. At Quartz Hill, found radiometric anomalies to be associated with silicified, barite-, chalcedony- and monazite-rich carbonate rock, possibly related to carbonatites. CRA farmed in and completed a low density stream sediment sampling programme (one sample per 8 sq km) over most of EL 9725 with results warranting no further work.

**Parks & Athanasiou, Western Mining Corporation; EL2657; CR84-15**

Originally prospecting for rubies, but then WMC farmed in searching for diamonds. Some corundum identified by prospectors. Reconnaissance sampling of the entire Entire Creek catchment to the west of EL 9725 recovered a single micro-diamond and highly significant pyrope garnet.

**CRA Exploration; EL2790; CR82-043**

Reconnaissance drainage sampling (one per 13.5 km²) over a portion of EL 10136. Some weakly anomalous Au values peaking at 25 ppb. Streams emanating from Hammer Hill were not anomalous in Ni or Co.

**Western Mining Corporation; EL 3115 and EL 3303; CR83-004, 83-332, 84-009, 85-045**

WMC followed up the Entire Creek diamond discovery with stream sediment sampling and recovered another microdiamond and several kimberlitic pyrope garnets. Bulk sampling failed to recover any more.

**BHP Minerals; EL 7178, 7179, 7180 and 7470; CR92-212**
Explored for Broken Hill-style base metal deposits in an area covering the eastern and northern parts of EL 9725 and 10136. Work programme was extensive, and included reprocessing aeromagnetics, EM surveys, soil, rockchip and stream sediment surveys and RC drilling.

**PNC Exploration (Australia) Pty Ltd; E 8901, 8220, 8675, 7967 and 8036; CR95-298, 96-286**

PNC conducted extensive uranium exploration over the Harts Range, including detailed airborne radiometrics and magnetics. Some of this exploration was within EL 9725. Discovered Yambla U prospect to the southwest of EL 9725. Samples from Quartz Hill pegmatite returned 4100-9300 ppm U, 1300-3600 ppm Ta, 1.4-2.9 % Y and 1.8-4.0 % Nb with REE minerals noted. Visible Au was identified in a malachite-stained, limonitic vein. At Holstein’s Prospect, identified a swarm of gossanous veins principally mineralised with Fe-Ba-REE-Th-S. Grab samples returned 0.1-10 % REE, 0.2-3 % P, 1.0-24 % Ba, 0.03-3.9 % Th, 0.05-7.0% La, 0.07-12% Ce and 40-600 ppm Y.

### 4.2 Arafura Resources Exploration Activities (2001-2006)

Andrew Drummond and Associates assessed the previous exploration on EL 9725 and 10136 as part of the Independent Geologist’s Report for the Arafura Resources IPO prospectus. Their report is summarised above (Section 4.1).

Southern Geoscience Consultants Pty Ltd were commissioned to subset, merge and reprocess aeromagnetic data over the Hammer Hill-Holstein’s area from publicly available government surveys.

A short reconnaissance trip was made to Hammer Hill, Holstein’s and West Gimlet in 2004. Six rockchip samples were collected from Hammer Hill for geochemical analysis and 3 samples were collected for petrographic examination. From Holstein’s lodes, eleven rockchip samples were collected for mineralogy and seven composite rockchip samples, one from each lode, were collected for geochemical analysis. At Holstein’s and West Gimlet a spectrometer was used to measure the thorium-specific radioactivity. The presence of thorium is considered to be diagnostic of the presence of REE mineralisation.

Geochemical results and petrographic analyses from Hammer Hill samples confirmed the presence of ultramafic rocks. Elemental ratios from microprobe analysis are consistent with those of known Ni-Cu deposits.

Assay results from the Holstein’s rockchips show elevated Ce, La, Ba, P, Y and Th. Low Ca abundances relative to P suggests that monazite is probably an important mineral. Difference between analytical methods show that much of the REE-Th mineralisation is recalcitrant (relatively acid insoluble).

Surveys of discrete magnetic lows at West Gimlet did not reveal anything of interest.
4.3 Mithril Resources Work 2006/07

Mithril completed a number of phases of surface geochemical sampling programs during 2006 and a number of high quality Ni/Cu/Co anomalies were detected. These were followed up with five ground em traverses which indicated no conductive bodies in the basement. The EM did however indicate that airborne EM would be a viable exploration tool in the region.

4.4 Mithril Resources Work 2007/08

During this reporting year a number of extensive exploration activities were completed over the project area. These included a 1325 line km VTEM survey, ground verification of targets generated followed by ground EM surveys over three targets. From this a number of high quality drill targets were identified for drill testing, specifically IVT015/016.

5.0 Mithril work completed 2008/09

During the reporting period Mithril completed a number of exploration program over the Project area. These included diamond drilling following heritage surveys, further ground EM, downhole EM and geological mapping and rockchip sampling (figure 2). Each of these programs are detailed below.

Figure 2: Location of work completed on Project

Diamond Drilling

Three dimond drillholes were completed for a total of 819.3m targeting ground EM conductors identified during the last reporting period associated with
IVT015/016. These drillholes are located in figure 2. Drillholes HHDD001 and 002 intersected significant pyrrhotite>pyrite>chalcopyrite (po>py>cpy) which explains the targeted conductive bodies. The third drillhole HHDD003 failed to intersect sulphides consistent with being conductive. In all drillholes minor po>py>cpy was intersected in narrow veins and veinlets within the intermediate to felsic gneiss.

The significant mineralisation intersected in HHDD001 and 002 varied from disseminations to narrow intervals of massive sulphide. Breccia textures were also present suggesting the sulphides have been introduced to the host rock.

Detailed summaries including cross sections of the drillholes are contained in Appendix 1 and all digital data in Appendix 2, with a petrographic report of five samples from HHDD001 in Appendix 3.

Ground EM

Two lines of slingram EM for a total of three line km were completed over the IVT015/016 anomaly. This was completed to help further refine the drill targets. A summary of these lines is located in Appendix 4 and data from this survey can be found in Appendix 5.

Downhole EM

Downhole EM (DHEM) was completed on all three drillholes. This work confirmed that the targeted body was intersected within HHDD001 and in HHDD002 and also confirms there is an untested offhole conductor in HHDD003. Offhole conductive bodies were also intersected in HHDD001 and 002 that are worthy of drill follow-up.

Summaries of the downhole EM can be found in Appendix 4 with all data in Appendix 6.

Rockchip Sampling and Mapping

In September/October 2008 time was spent following up landsat anomalies on the project. Many of these were found to be iron and silica caprock and assay results from rockchips have confirmed them to be after ultramafic rocks (i.e highly elevated nickel and chrome values). In addition, during this program iron/goethitic altered rocks were found on the eastern portion of the project to contain elevated Au, Ag, As and Pb (0.14g/t, 1.3g/t, 981ppm, 388ppm respectively) in sample # OKRC-159. Further work in the form of basic mapping and sampling are required to follow-up both the nickel and gold anomalies. Location and rockchip assay results are contained in Appendix 7. One stream sediment was also taken in the vicinity of the gold anomalous sample over an area of sheetwash. This sample was submitted for five size fraction analysis and no anomalis was detected (Appendix 8).

All samples were submitted to ALS laboratories in Alice Springs for the ME-ICP (33 elements) analysis with Pt, Pd, Au by the PGM-ICP25 method.
6.0 Expenditure 7th Year of Tenure

In the 7th year of tenure, $525K was spent on the Hammer Hill Project. Most of the work completed was concentrated on EL10136 where over $456K was spent (see expenditure report).

7.0 Conclusions / Further Work

Drilling of the ground EM targets generated from the VTEM survey have confirmed the conductors to be after accumulations of sulphide with minor copper sulphides. There are a number of untested ground and downhole conductive bodies remaining in the vicinity of these drillholes and these should be drill tested to determine if the copper grades increase.

Regional geological mapping and rock sampling has also identified a number of poorly explored ultramafic bodies and a gold anomalous rockchip sample. Further work here should include more detailed mapping and sampling to determine the significance of both.

8.0 Proposed Work Program 2009

Further work over the project area will consist of a RAB/Aircore drilling program to determine the source of some of the magnetic anomalies under cover. In addition further mapping and sampling is planned followed by ground EM surveys over prospective ultramafic bodies if warranted. Drilling of the untested conductive bodies identified around IVT015/016 should also be completed.

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*Table 2: Proposed expenditure 2009*